Introduction to 4GL Development Environment

Part : 2

Duration : 06hrs

Creating Databases and Tables; Creating and using Forms, Queries and Reports

MySQL and MS Access Examples

- **Creating a new database using MySQL**
  - right-click on an existing database and choose the Create New Schema option.
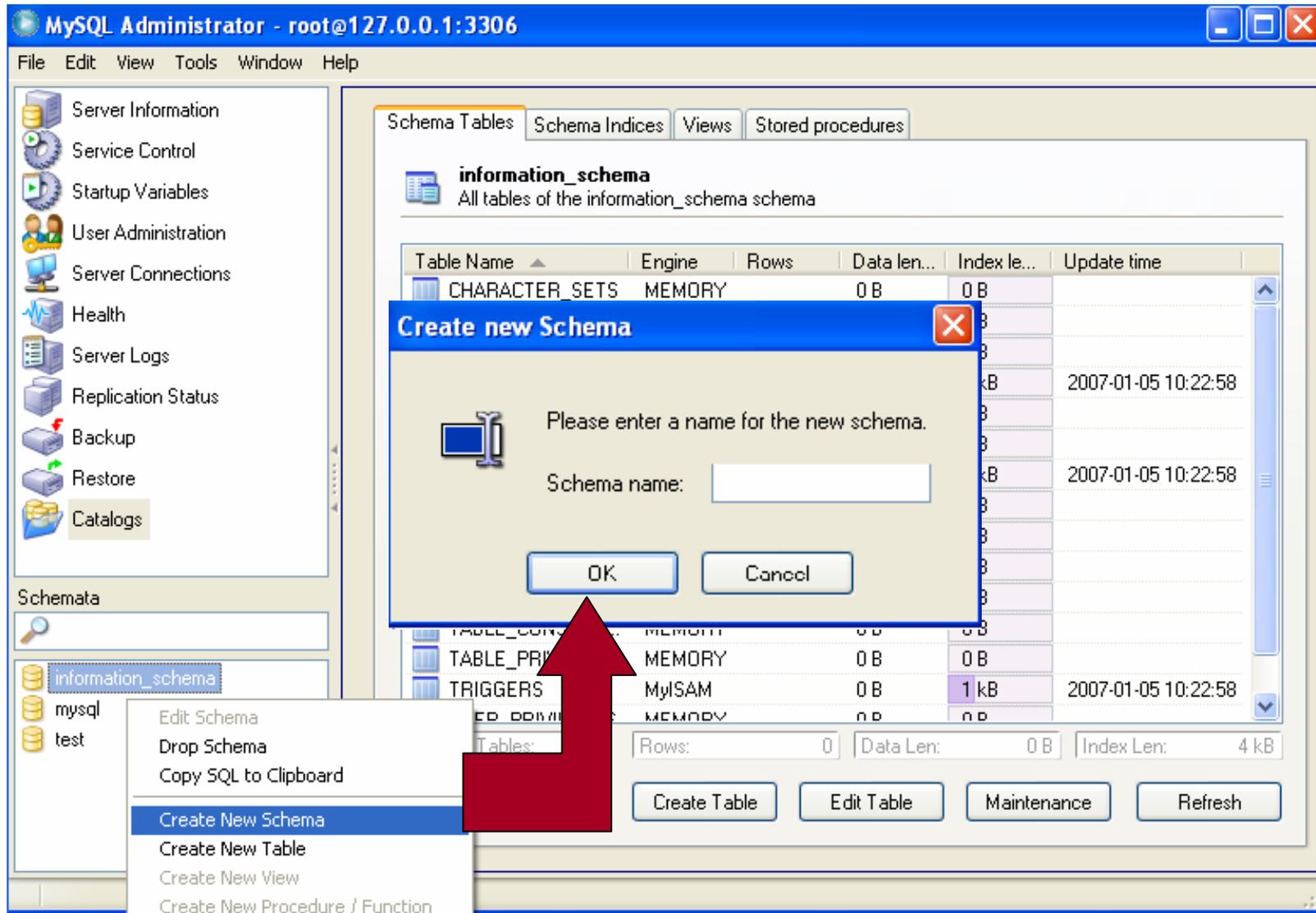
- Example: The following relations are part of a Hospital relational database schema.

  Patient (patientCode, pname, dob, address, sex, telephone)
  History (patientCode, treatmentDate, drug, dosage, quantity, instructions)
 *Treatment (patientCode, treatmentDate, doctor, cost)*
  Medicine (drug, dosage, unit-cost)

Suppose that all the relations were created by the database administrator.

Create new Schema ✕

Please enter a name for the new schema.

Schema name: | Hospital |

[OK] [Cancel]
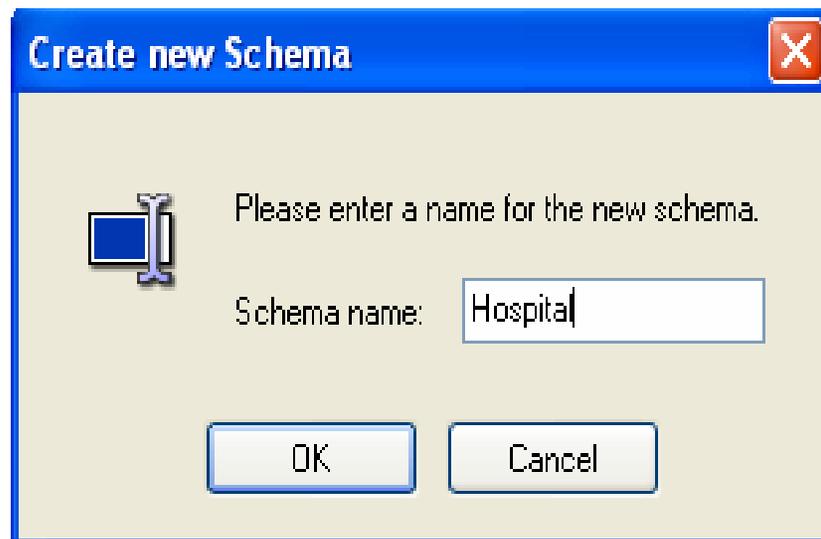
Type in the name of the schema on the text box and click on the OK button to create the new database.

- Creating tables

  - Select the appropriate database from the list of Schemata
  - The following screen will appear on the right side of the window
  - Click on the 'Create Table' button to create a new table.
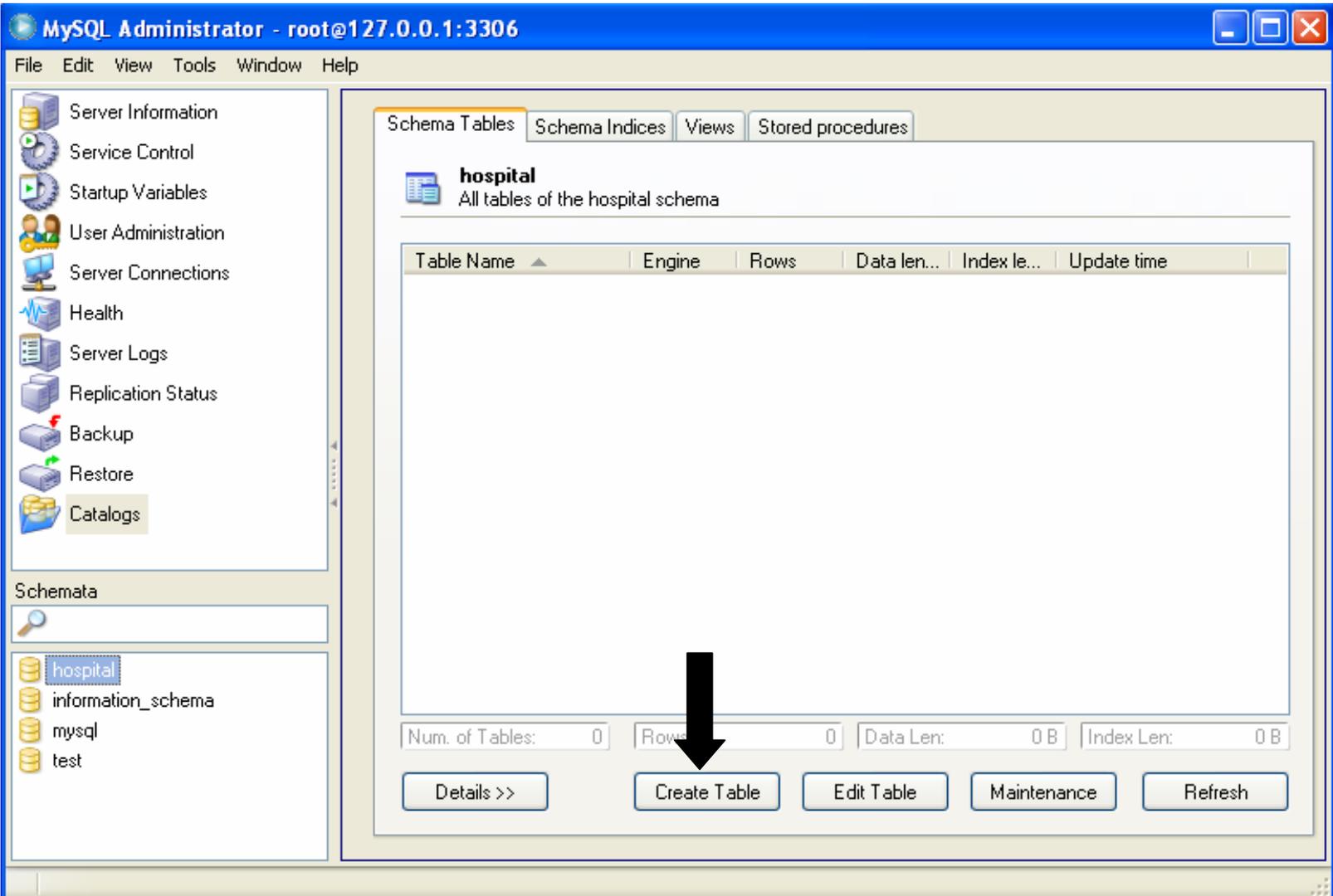
Name of the table
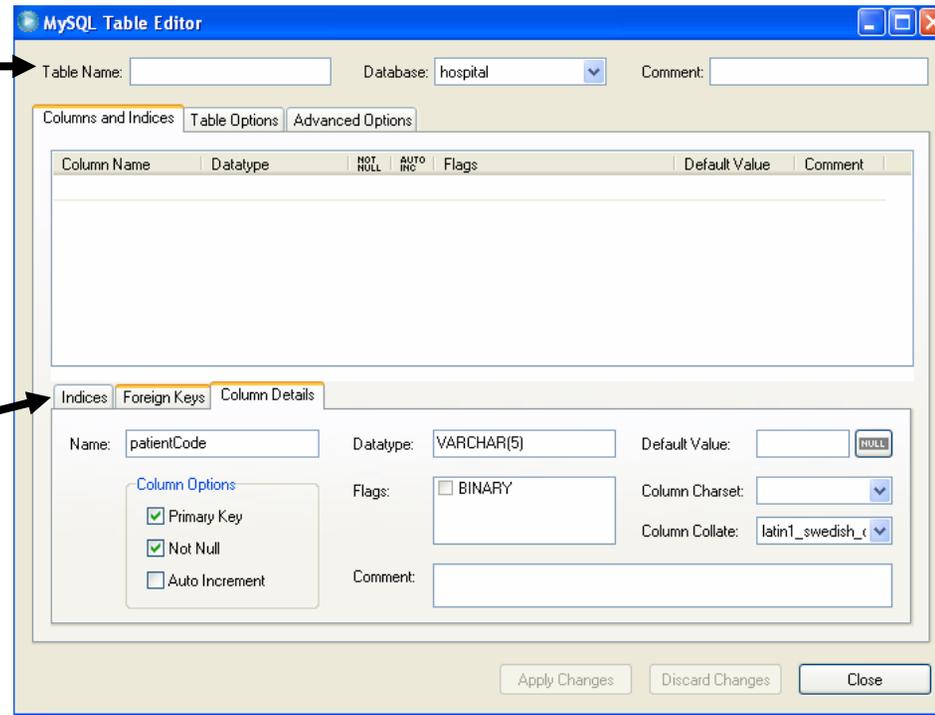
Column details can be provided on this space.

- The tabbed area is divided into three sections:

  - *Columns and Indices:* Use the Columns and Indices tab to create and modify the table's column and index information. You can also create FOREIGN KEY relationships using this tab.

  - *Table Options:* Use the Table Options tab to choose the storage engine and default character set used by the table.

  - *Advanced Options:* Use the Advanced Options tab to configure options such as the per-table storage directory, MERGE and RAID table options, and table/row length options.

- **Example**
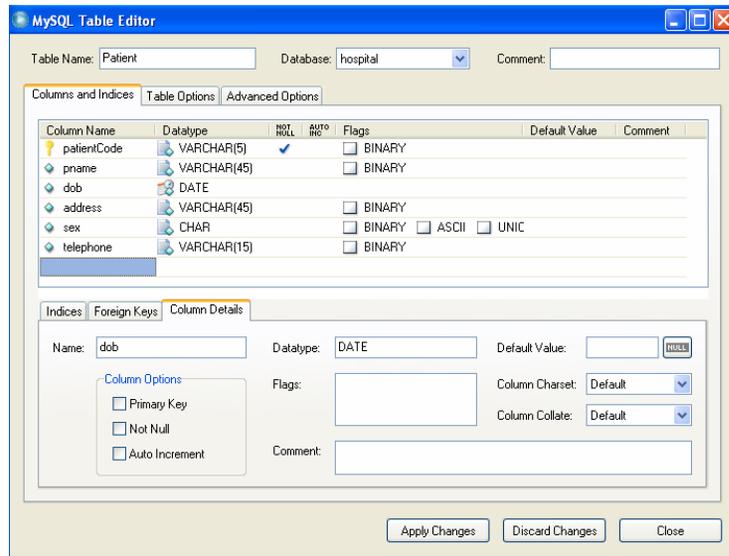
Click on 'Apply changes' button
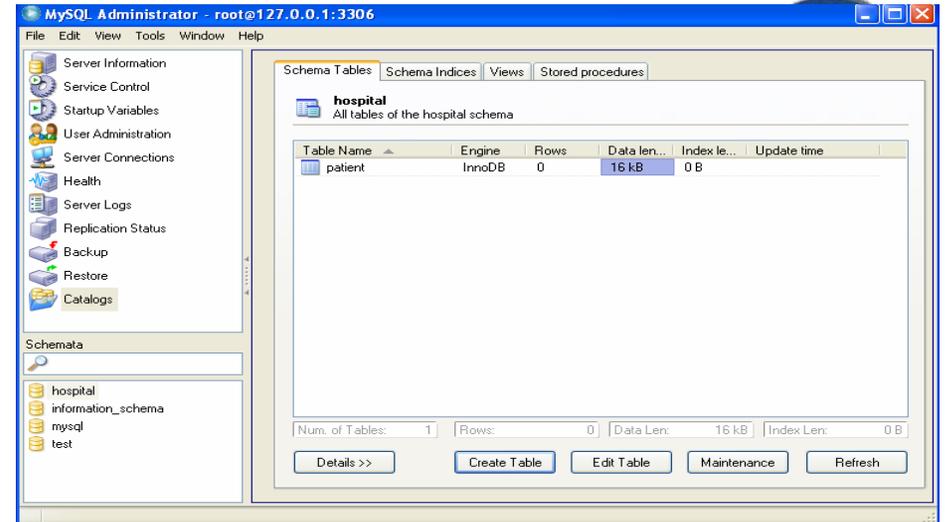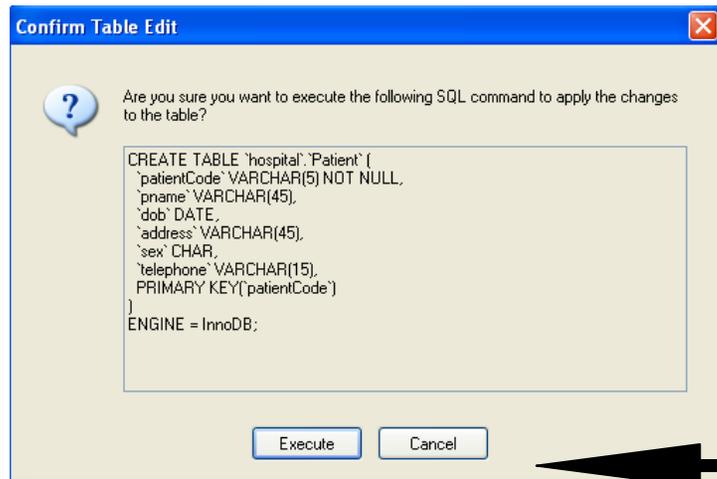
Finally close the window
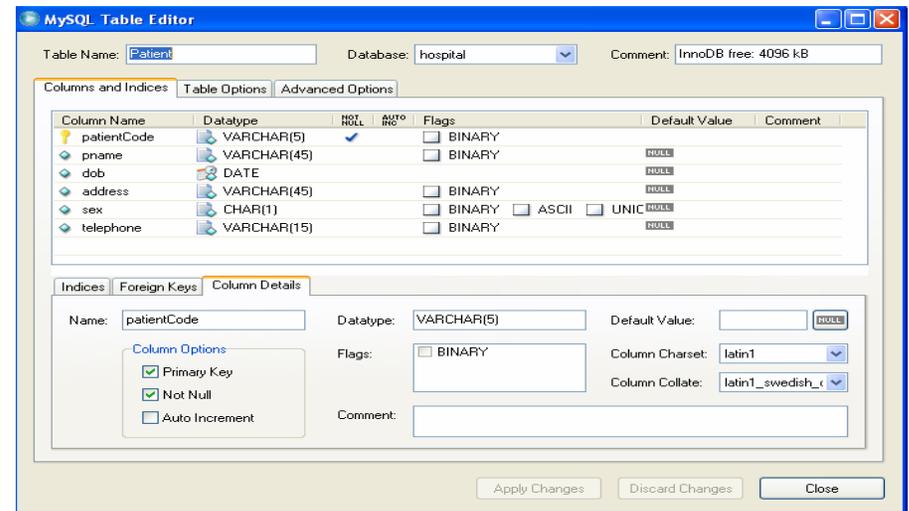
Click on 'Execute'

- After creating all the tables for the Hospital relational database schema, you will get the following window.

- Example: Suppose the DBA (root user) needs to grant the following privilege to user account 'Noel'

- Account Noel can
  - retrieve or modify *Treatment* relation

    ❖ Select the user 'Noel'
   ❖ Double click on the Hospital Schemata
    ❖ Select the Table *'Treatment'*
    ❖ Grant the privileges 'TABLE_SELECT', 'TABLE_UPDATE' , 'TABLE_ALTER' , 'COLUMN_INSERT'
    ❖ Click on the 'Apply Changes' button
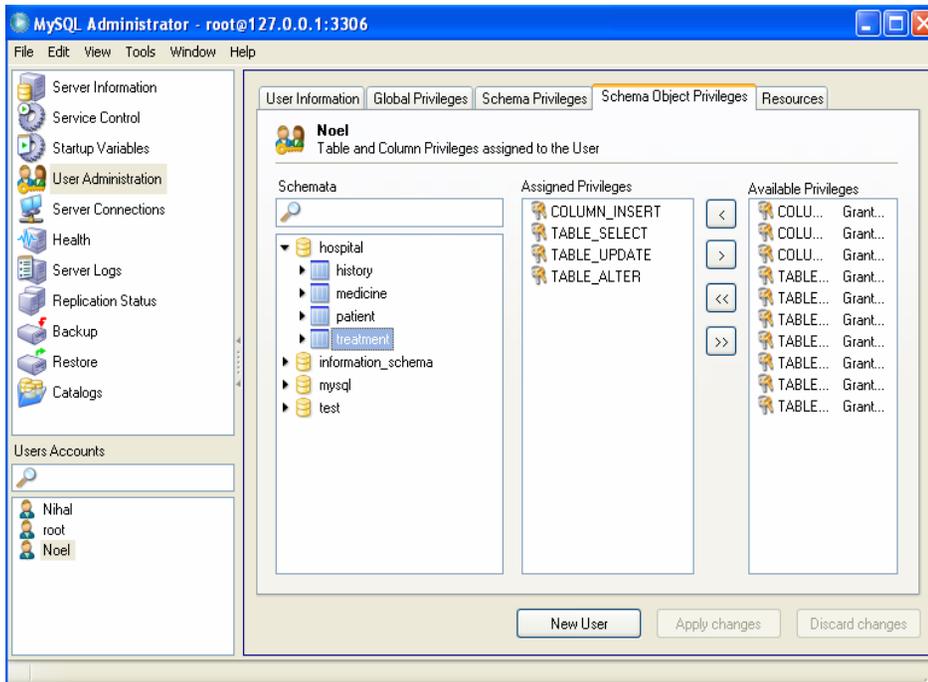
- retrieve all the attributes of Medicine relation

  ❖ Select the user 'Noel'
  ❖ Double click on the Hospital Schemata
  ❖ Select the Table *'Medicine'*
  ❖ Grant the privilege 'TABLE-SELECT'
  ❖ Click on the 'Apply Changes' button
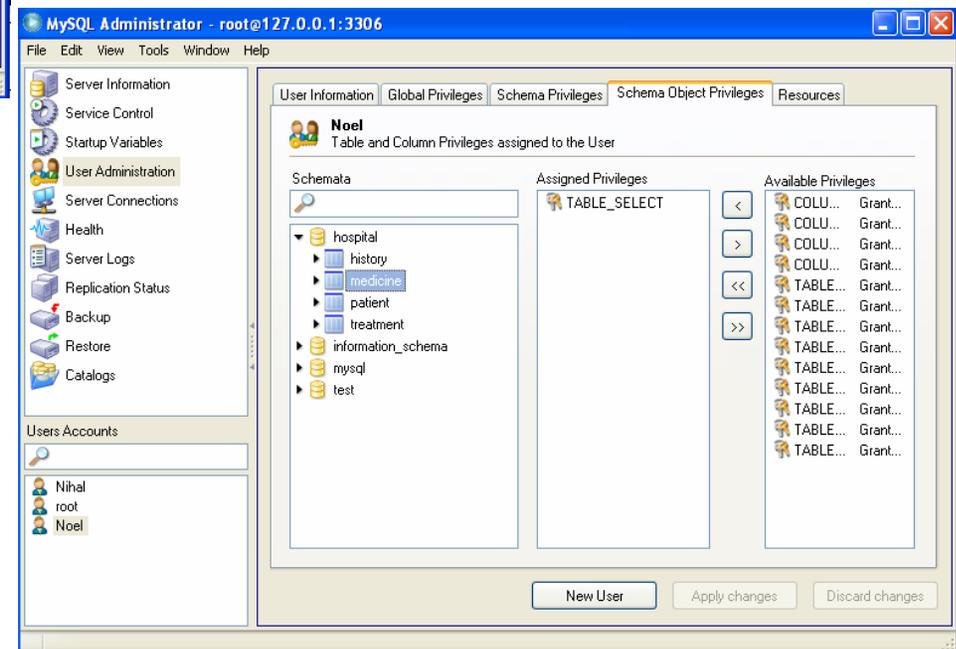
- Retrieve all the attributes of Patient relation except for dob and address.

    ❖ Select the user 'Noel'
    ❖ Double click on the Hospital Schemata
    ❖ Double click on the Table *'Patient'*
    ❖ Grant the privilege 'COLUMN-SELECT' for each column one by one except for the dob and address
    ❖ Click on the 'Apply Changes' button